

BookletChartTM

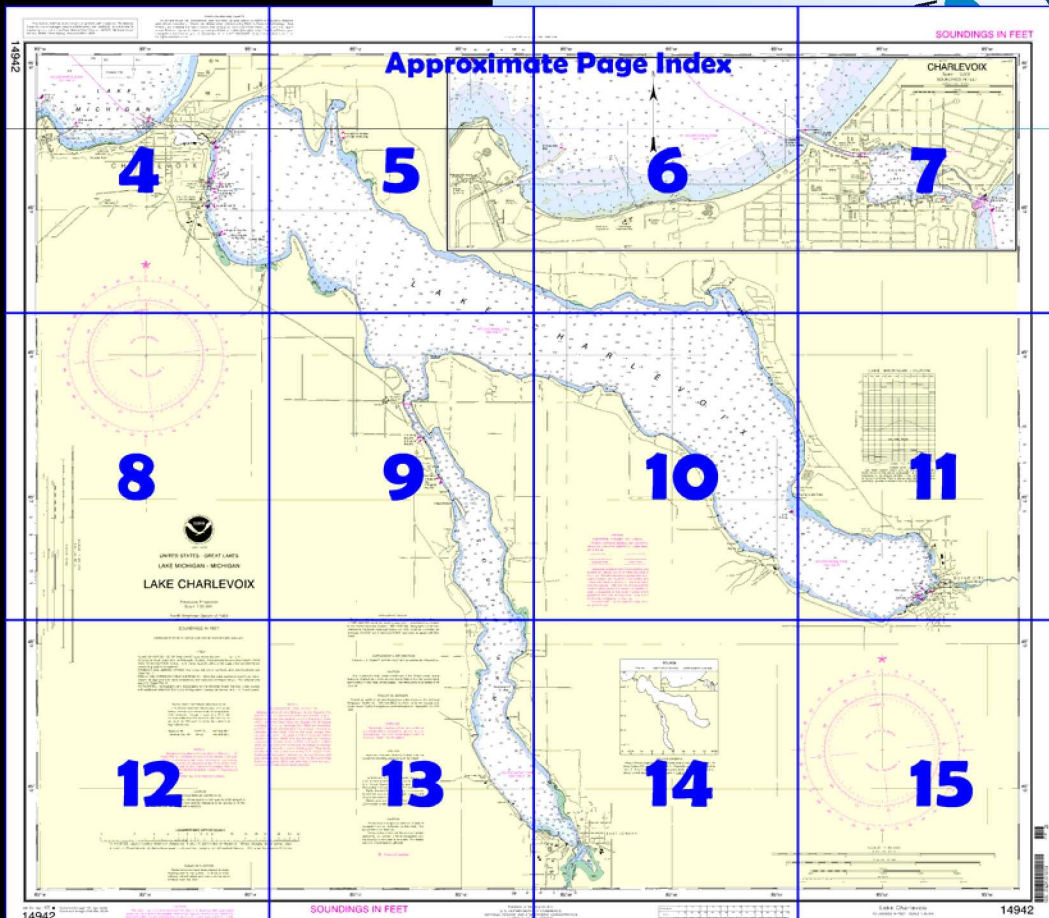
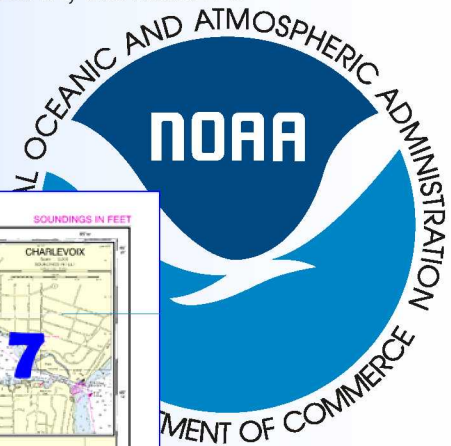
Lake Charlevoix

(NOAA Chart 14942)



A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- ✓ Complete, reduced scale nautical chart
- ✓ Print at home for free
- ✓ Convenient size
- ✓ Up to date with all Notices to Mariners
- ✓ United States Coast Pilot excerpts
- ✓ Compiled by NOAA, the nation's chartmaker.



Home Edition (not for sale)



What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

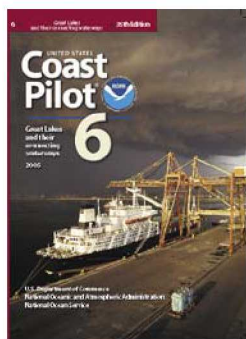
This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



[Coast Pilot 6, Chapter 11 excerpts]

(59) **Charlevoix, Mich.**, is a city and harbor at the mouth of **Pine River**, about midway of the rounding shore between Little Traverse Bay and Grand Traverse Bay.

(60) A dredged entrance channel leads SE from Lake Michigan between parallel piers through the lower portion of Pine River to Round Lake, the harbor proper of Charlevoix. The outer ends of the piers are marked by lights. From the E end of Round Lake, a dredged channel leads SE through the upper

portion of Pine River to Lake Charlevoix, entered about 1 mile distant from the Lake Michigan shoreline. Mooring to the Government piers or revetments is prohibited.

(61) In July 2004, the controlling depth was 15.2 feet from deep water in Lake Michigan to Round Lake (except for shoaling to 8.8 feet along the S edge of the entrance channel just off the lakeward end of the S pier.) In

May 2004, the controlling depth was 16 feet in the dredged channel from Round Lake to Lake Charlevoix.

(62) **Round Lake**, about 0.4 mile in diameter, has depths to 60 feet, with deep water generally close to shore. The lake has good anchorage.

(66) **Charlevoix Coast Guard Station** is on the N side of the Pine River entrance to Lake Charlevoix.

(67) Federal regulations specify a **speed limit** of 8 mph in the harbor.

(68) A marina, developed by the Michigan State Waterways Commission and operated by the city, is on the W side of Round Lake. Transient berths, gasoline, diesel fuel, water, electricity, sewage pump-out, and harbormaster services are available. The harbormaster monitors VHF-FM channels 16 and 9. Hoists to 20 tons are available for hull and engine repairs.

(70) **Lake Charlevoix** extends about 14 miles SE from the head of Pine River and is from 1 to 2 miles wide, with depths to over 100 feet and deep water generally close to shore. **Boyne City, MI** is at the SE end of the lake.

(71) A municipal marina at Boyne City provides transient berths, water, ice, electricity, sewage pump-out, and a launching ramp. At **Advance, Mich.**, about 2.5 miles W of Boyne City, the Northern Michigan Electric Cooperative, Inc. has a coal dock providing about 500 feet of berthing space between dolphins. The dock has a deck height of 8 feet with a depth of 20 feet reported alongside in 1978. About 5 miles from the NW end of Lake Charlevoix, **South Arm** extends 9 miles S from **Ironton** at the N end to **East Jordan** at the S end. A marina developed by the Michigan State Waterways Commission at East Jordan provides transient berths, gasoline, diesel fuel, water, electricity, sewage pump-out, and harbormaster services. The harbormaster monitors VHF-FM channels 16 and 9.

(72) A **slow-no wake speed** is enforced in the narrows of South Arm opposite Ironton. (See Small-craft Regulations, State of Michigan, chapter 3.)

Table of Selected Chart Notes

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<div><p>CAUTION</p><p>Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.</p></div>
<div><p>CAUTION</p><p>BASCULE BRIDGE CLEARANCES</p><p>For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.</p></div>
<div><p>HORIZONTAL DATUM</p><p>The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1902 must be corrected an average of 0.663" southward and 0.900" westward to agree with this chart.</p></div>
<div><p>POLLUTION REPORTS</p><p>Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).</p></div>
<div><p>SOURCE DIAGRAM</p><p>Most of the hydrography identified by the letter "I" was surveyed by the U.S. Army Corps of Engineers prior to 1974. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, <i>United States Coast Pilot</i>.</p></div>

<div><p>CAUTION</p><p>This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.</p></div>
<div><p>This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.</p></div>
<div><p>AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.</p></div>
<div><p>PLANE OF REFERENCE OF THIS CHART (Low Water Datum) 577.5 ft. Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985)</p></div>
<div><p>SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.</p></div>
<div><p>BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.</p></div>
<div><p>AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.</p></div>

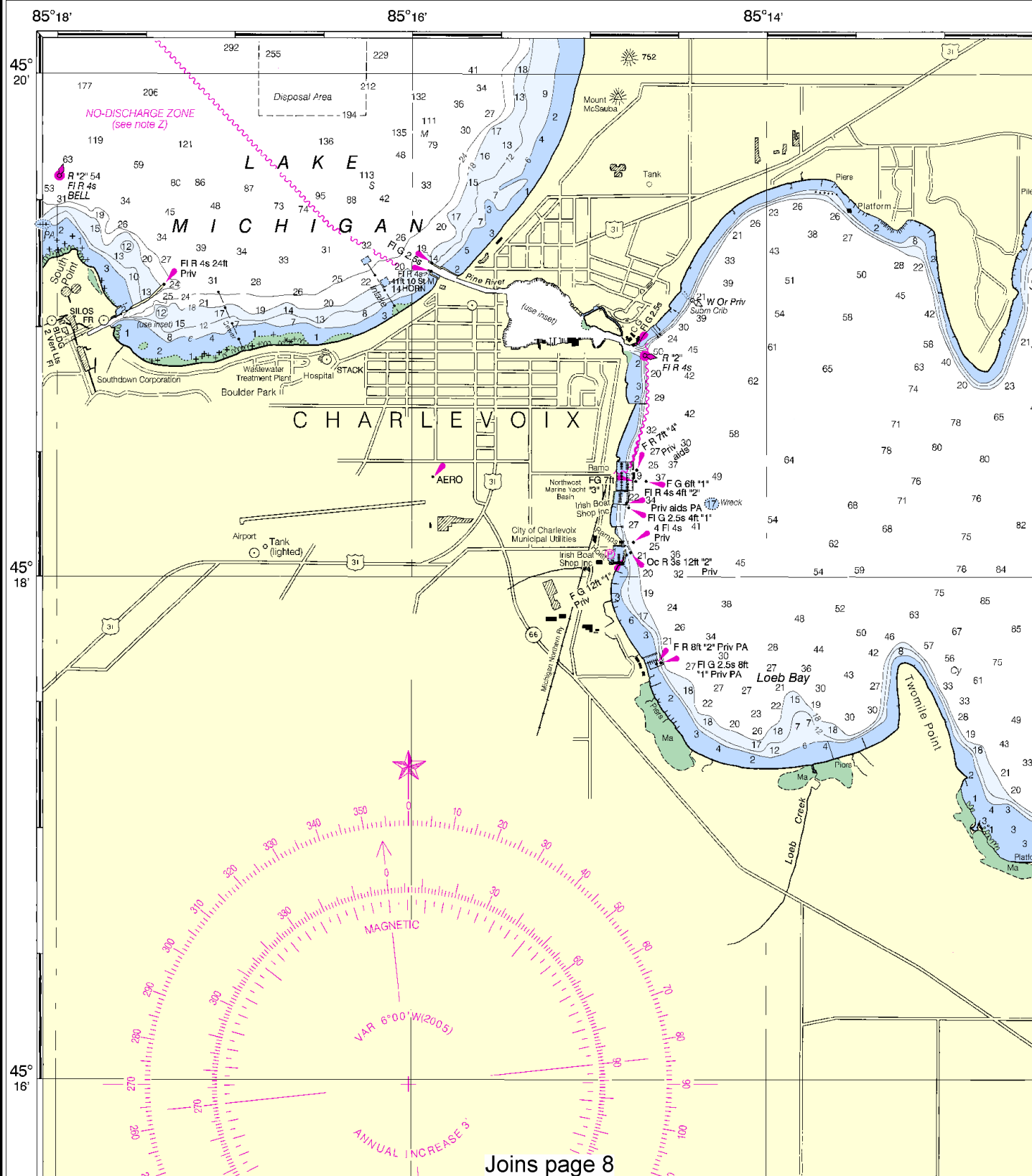
PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or help@OceanGrafix.com.

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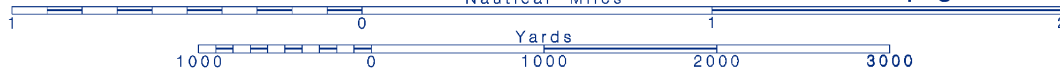


Joins page 8

Printed at reduced scale.

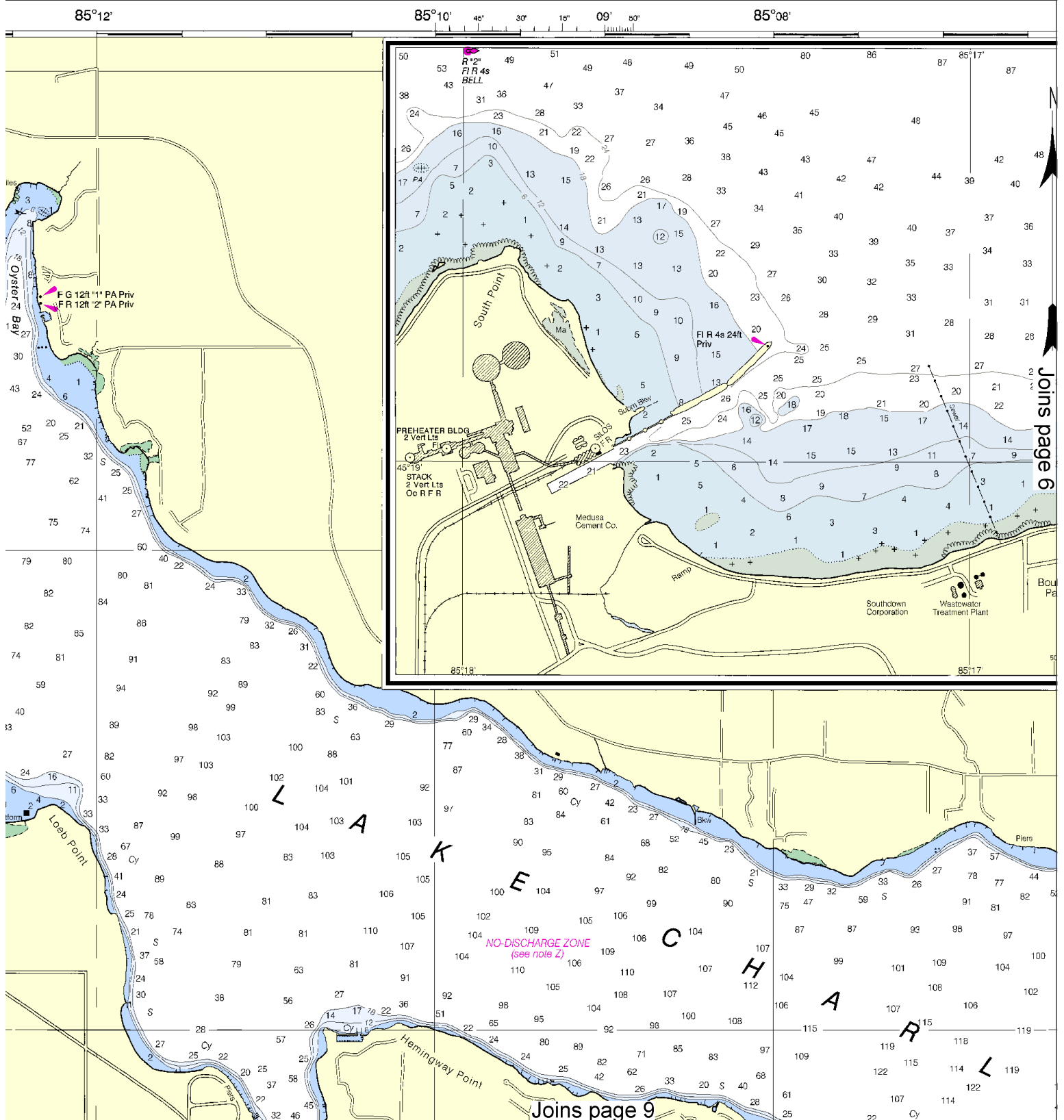
~~SCALE 1:30,000~~
Nautical Miles

See Note on page 5.

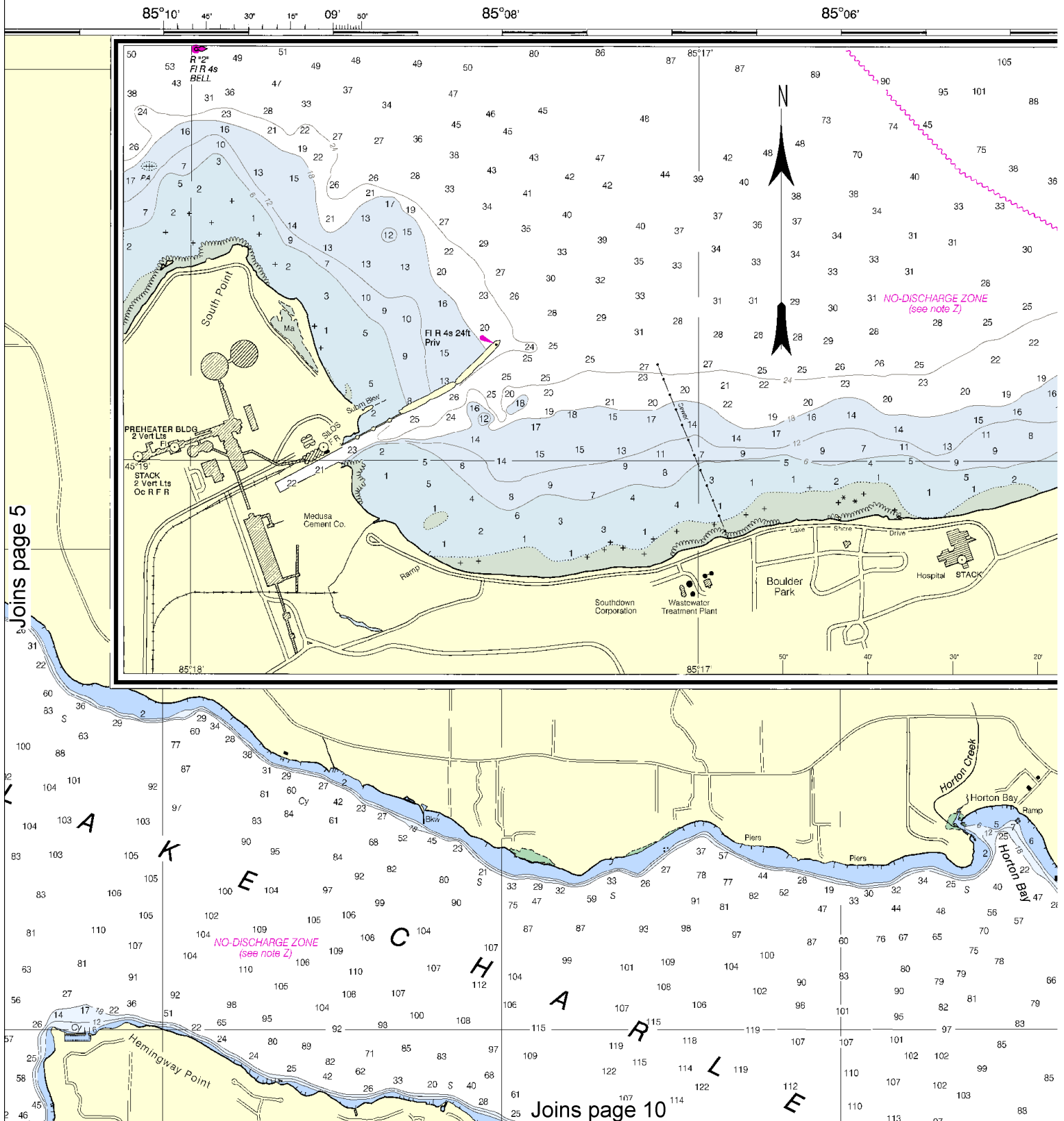


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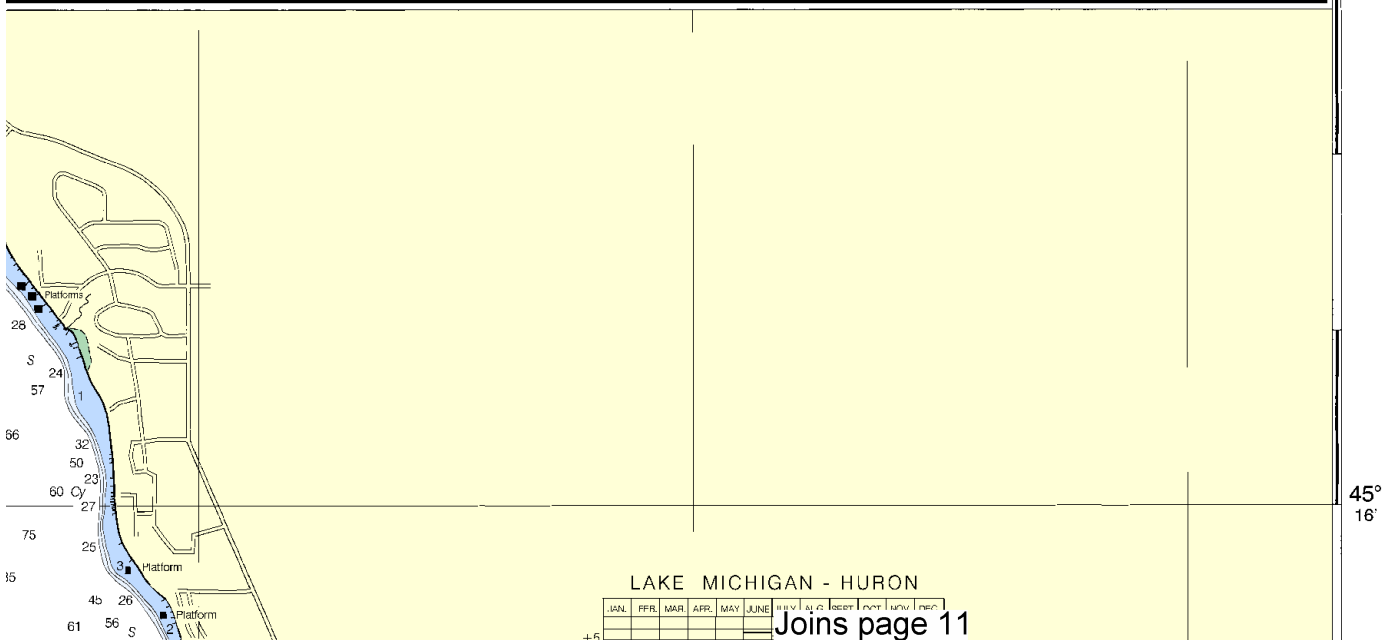
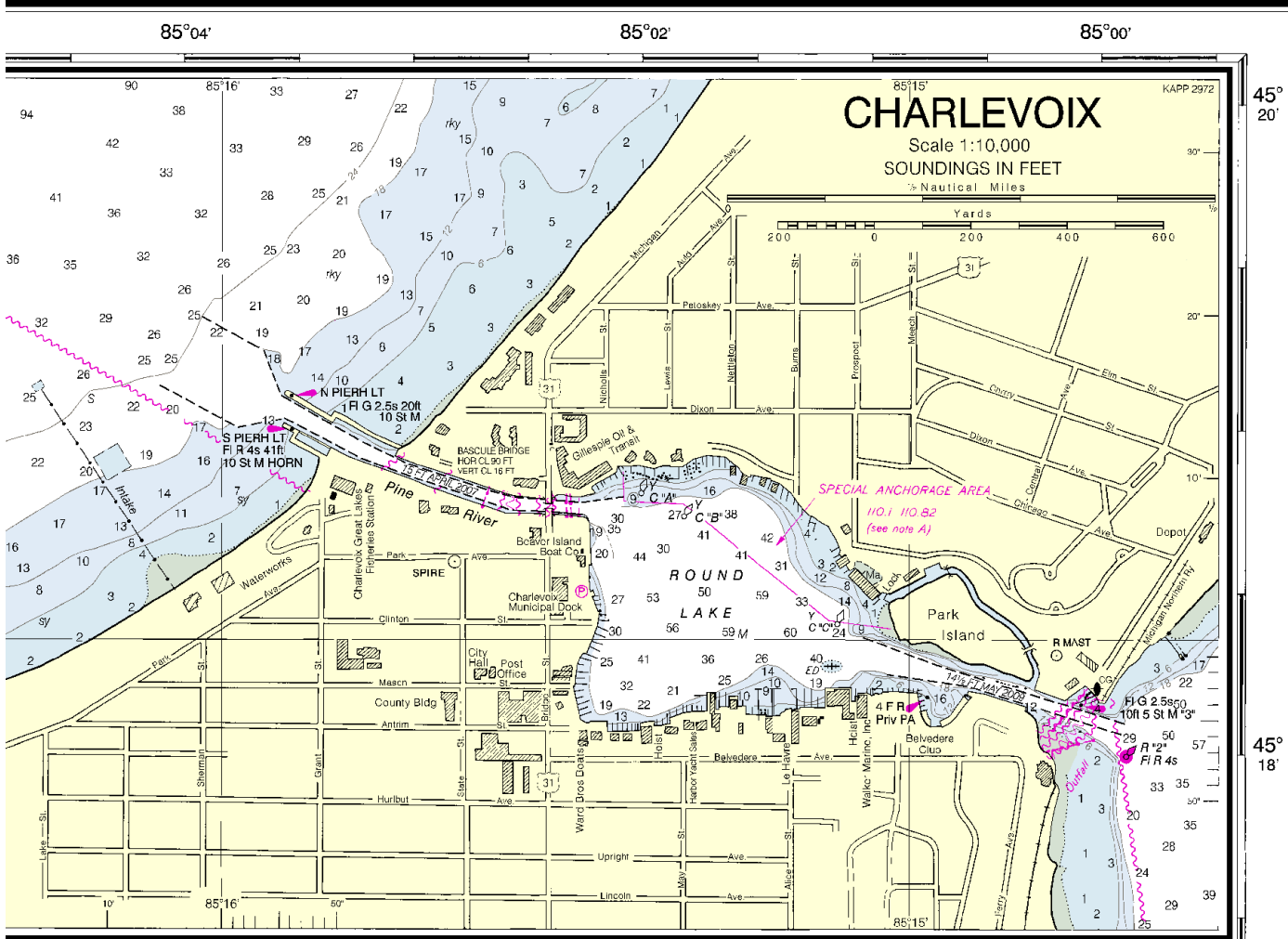




This BookletChart was reduced to 75% of the original chart scale.
 The new scale is 1:40000. Barscales have also been reduced and
 are accurate when used to measure distances in this BookletChart.

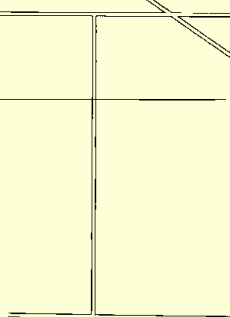
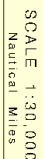


SOUNDINGS IN FEET



This BookletChart has been updated with: Coast Guard Local Notice To Mariners: 0710 2/16/2010,
NGA Weekly Notice to Mariners: 0910 2/27/2010,
Canadian Coast Guard Notice to Mariners: 0110 1/29/2010.

7

45°
12'

LAKE CHARLEVOIX

Polyconic Projection
Scale 1:30,000

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

Additional information can be obtained at nauticalcharts.noaa.gov.

Joins page 12

Printed at reduced scale.

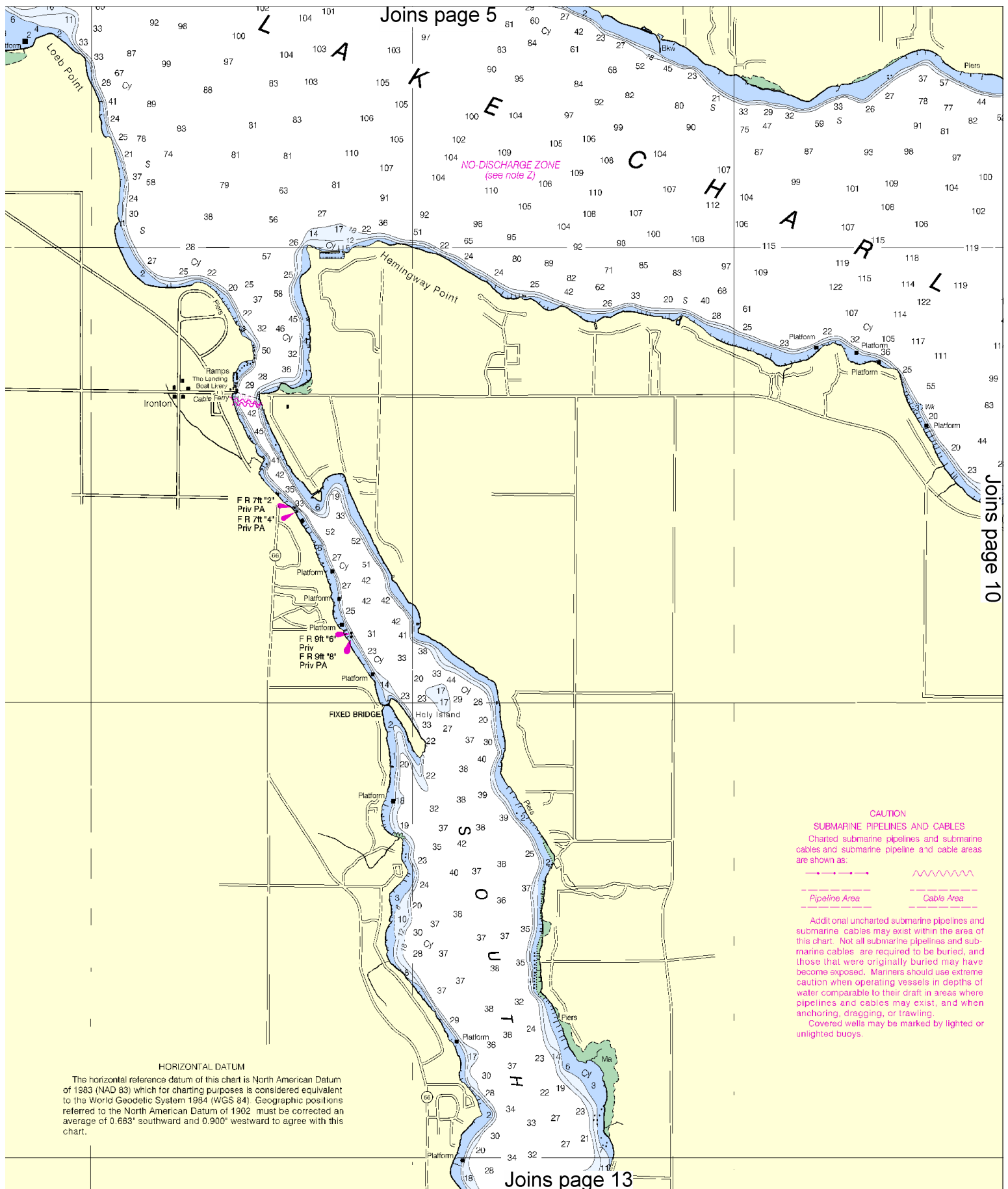
SCALE 1:30,000
Nautical Miles

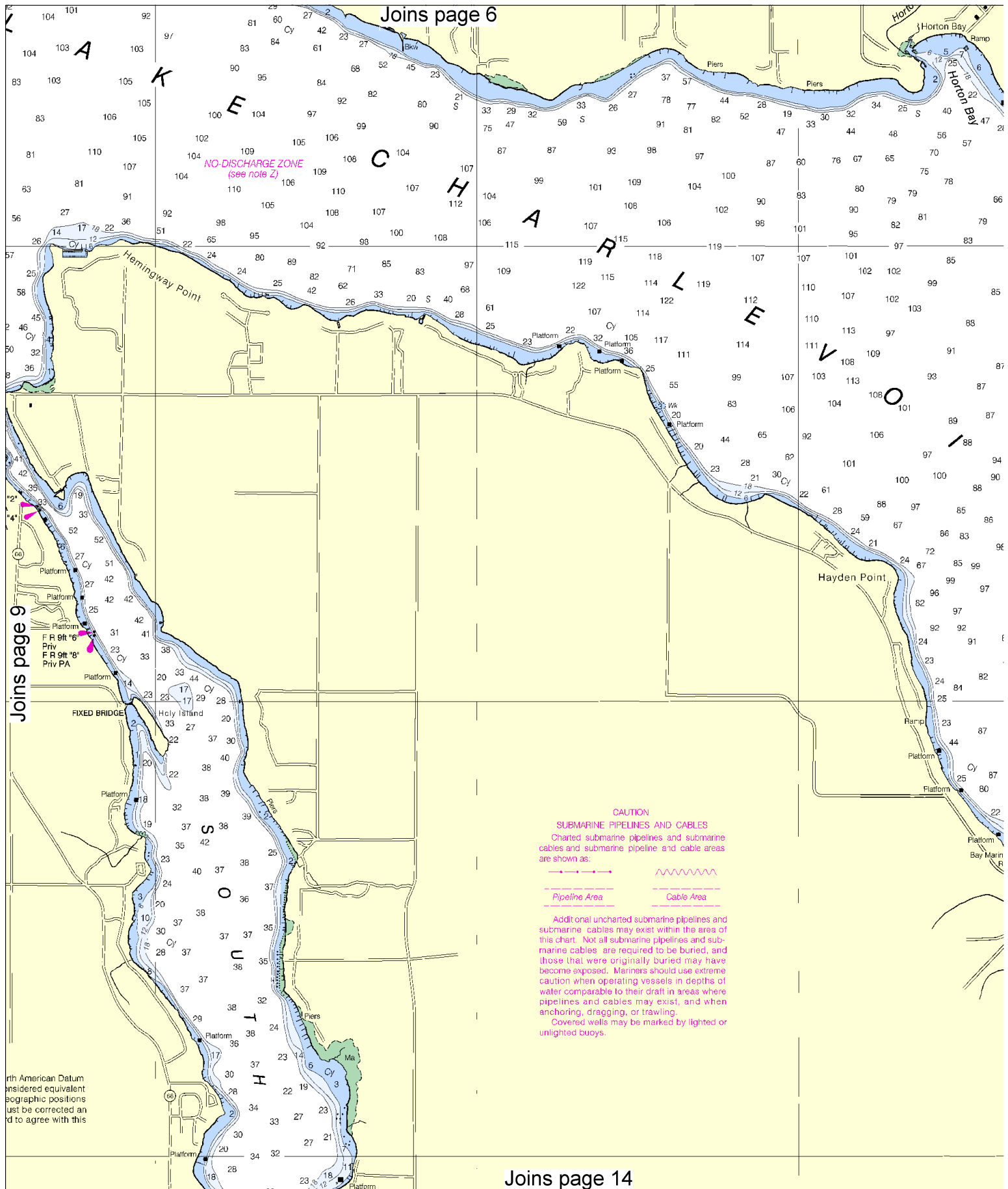
See Note on page 5.

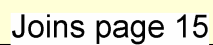


8









LAKE MICHIGAN - MICHIGAN

LAKE CHARLEVOIX

Polyconic Projection
Scale 1:30,000

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

Additional information can be obtained at nauticalcharts.noaa.gov.

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) 577.5 ft.
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985)
AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.
SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.
BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.
AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Gaylord, MI	WWF-70	162.500 MHz
Traverse City, MI	KIH-22	162.400 MHz

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio or at the Office of the District Engineer, Corps of Engineers in Detroit, Michigan.

Refer to charted regulation section numbers.

NOTE Z

NO-DISCHARGE ZONE, 40 CFR 140

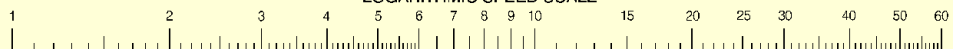
Michigan waters of Lakes Michigan, Huron, Superior, Erie and St. Clair, all waterways connected thereto, and all inland lakes are designated as a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. Commercial vessel sewage shall include graywater. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/.

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

LOGARITHMIC SPEED SCALE



To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

85°18'

85°16'

85°14'

26th Ed., Apr. / 05 ■ Corrected through NM Apr. 02/05
Corrected through LNM Mar. 22/05

14942

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

SOU

12



Printed at reduced scale.

SCALE 1:30,000
Nautical Miles

See Note on page 5.



Pipeline Area
Cable Area

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling. Covered wells may be marked by lighted or unlighted buoys.

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1902 must be corrected an average of 0.663" southward and 0.900" westward to agree with this chart.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 6 for important supplemental information.

CAUTION
Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

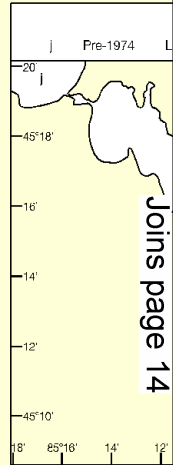
CAUTION
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution. Station positions are shown thus:
⊙ (Accurate location) ○ (Approximate location)

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners. During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

Ⓟ Pump-out facilities

NO-DISCHARGE ZONE
(see note Z)





Most of the hydrography the U.S. Army Corps of Engineers shown on this diagram. R

85°12' 85°10' 09' 45' 30' 15' 85°08' 50'

INDINGS IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

 Pipeline Area
 Cable Area
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North American Datum considered equivalent geographic positions must be corrected and to agree with this

Additional information.

Great Lakes, some may be submerged, should proceed with

Access to the National Hydrographic Survey to the nearest U.S. Coast Guard cutter (33 CFR 117.10)

Not to be used solely on the basis of this chart. Refer to the Light List for details.

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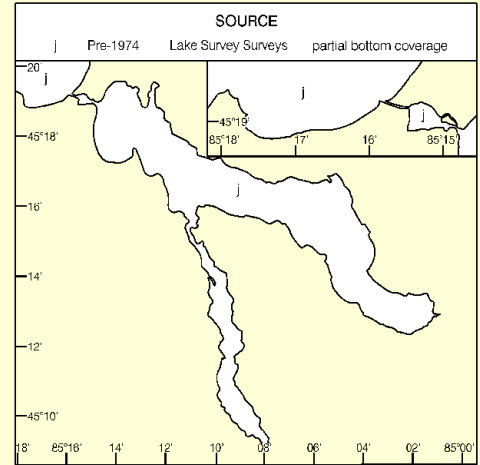
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Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS	1	2	3	4	5	6	7	8	9
FEET	6	12	18	24	30	36	42	48	54
METERS	1	2	3	4	5	6	7	8	9

14

Printed at reduced scale. SCALE 1:30,000


Nautical Miles

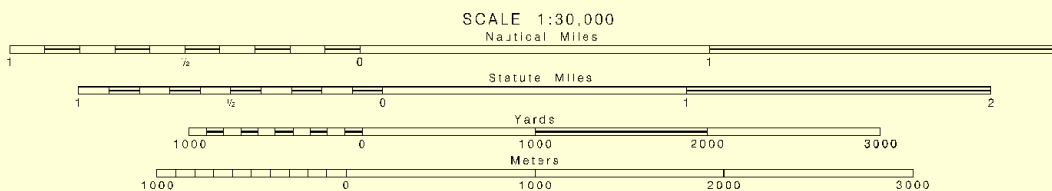
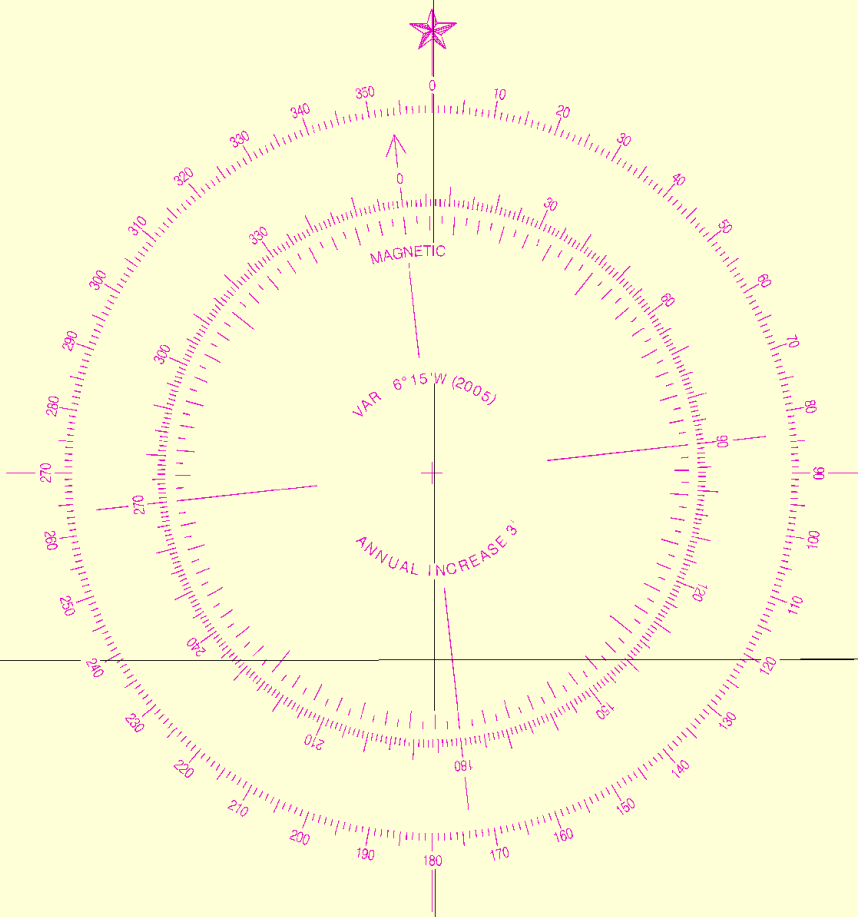
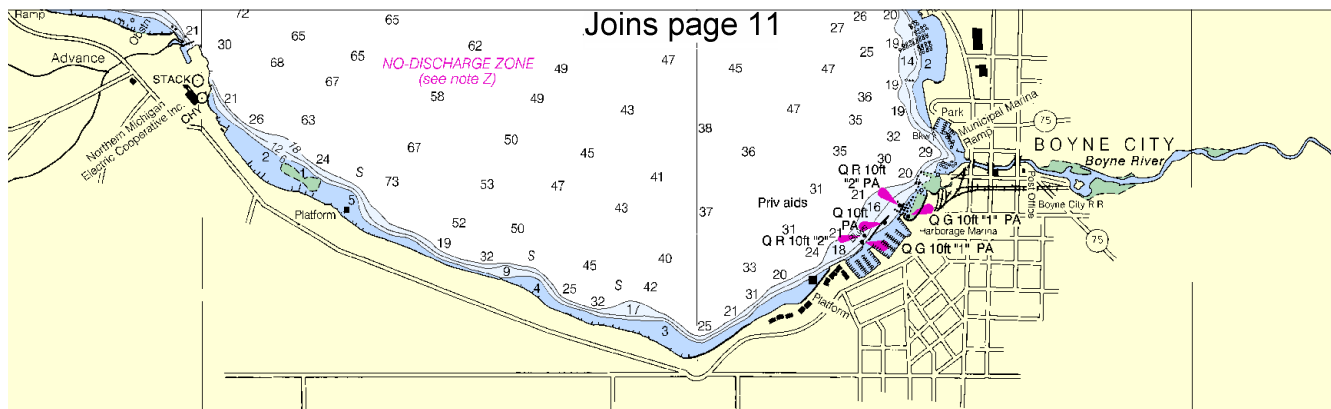
Yards

1000 0 1000 2000 3000

See Note on page 5.

North





85°04'

85°02'

85°00'

10	11	12	13	14	15	16	17
60	66	72	78	84	90	96	102
108	114	120	126	132	138	144	150

Lake Charlevoix
SOUNDINGS IN FEET - SCALE 1:30,000

14942



ED. NO. 26



NSN 7642014010704
NGA REFERENCE NO. 14XHA14942

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 & 78A – Recreational boat channels.

Distress Call Procedures

1. Make sure radio is on.
2. Select Channel 16.
3. Press/Hold the transmit button.
4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
5. Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
6. Release transmit button.
7. Wait for 10 seconds – If no response Repeat MAYDAY Call.

HAVE ALL PERSONS PUT ON LIFE JACKETS !!

Mobile Phones – Call 911 for water rescue.

Coast Guard Search & Rescue (RCC) – 216-902-6117

Coast Guard S & R (Sault Ste Marie) – 906-635-3236

Coast Guard S & R (Great Lakes) – 616-850-2501

NOAA Weather Radio – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



NOAA CHARTING PUBLICATIONS

Official NOAA Nautical Charts – NOAA surveys and charts the national and territorial waters of the U.S, including the Great Lakes. We produce over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: www.NauticalCharts.NOAA.gov.

Official Print-on-Demand Nautical Charts – These full-scale NOAA charts are updated weekly by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print-on-Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at www.OceanGrafix.com.

Official Electronic Navigational Charts (NOAA ENC[®]) – ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official Raster Navigational Charts (NOAA RNC[™]) – RNCs are geo-referenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official BookletCharts[™] – BookletCharts[™] are reduced scale NOAA charts organized in page-sized pieces. The "Home Edition" can be downloaded from NOAA for free and printed. The Internet address is www.NauticalCharts.gov/bookletcharts.

Official PocketCharts[™] – PocketCharts[™] are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

Official U.S. Coast Pilot[®] – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from NOAA chart agents or may be downloaded for free at www.NauticalCharts.NOAA.gov.

Official On-Line Chart Viewer – All NOAA nautical charts are viewable here on-line using any Internet browser. Each chart is up-to-date with the most recent Notices to Mariners. Use these on-line charts as a ready reference or planning tool. The Internet address is www.NauticalCharts.gov/viewer.

Official Nautical Chart Catalogs – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to <http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm>.

Internet Sites: www.NauticalCharts.NOAA.gov, www.NOAA.gov, www.TidesandCurrents.NOAA.gov, www.NOS.NOAA.gov.